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PS Form 3800, January 2001 See Reverse for Instructions

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

February 1, 2002

Reply To
Attn Of: WCM-121

VIA FAX and CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Rob J. Hartman
FMC Corporation Pocatello Plant
Highway 30 West
P.O. Box 4111
Pocatello, Idaho 83202

RE: *United States of America v. FMC Corporation*, No. CIV 98-0406-E-BLW (D. Idaho),
RCRA Closure Plan for Pond 17

Dear Mr. Hartman:

This letter concerns the closure plan FMC and Astaris submitted to the Environmental Protection Agency (EPA) in June 2001 for Pond 17 at your Pocatello facility. EPA provided the public with an opportunity to review and comment on the plan. The comment period began on October 4, 2001, and closed on November 16, 2001. EPA received a number of comments from the public as well as from the Shoshone-Bannock Tribes. EPA has considered those comments and a response to the comments will be provided to the Tribes and to the individuals that submitted comments, as well as to other interested parties upon request.

In a letter dated December 13, 2001, the Fort Hall Business Council called on EPA to require FMC to remove and treat the sediment in Pond 17 in accordance with Paragraph 22 of Attachment A to the *United States of America v. FMC Corporation* Consent Decree. The basis for this request was an assertion by the Tribes that FMC failed to treat precipitator dust slurry discharged to Pond 17 in a batch mode in the slurry pots for a minimum of 20 minutes, in accordance with specified treatment requirements.

Provisions of the Consent Decree Regarding Pond 17 and Pond 18

Paragraph 22 of Attachment A of the Consent Decree provides that:

In the event that FMC deposits in Pond 17 any phoshy waste other than precipitator slurry treated using the NOSAP [Non-Hazardous Slurry Assurance Project] process and meeting the criteria for NOSAP Waste as set forth in the EPA approved Pond Management Plan [PMP], Pond 17 shall be subject to the sediment removal and treatment requirements of Paragraph 21.

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Paragraph 21 required all sediment collected in Pond 18 to be removed and treated in the Land Disposal Requirements (LDR) Treatment System within five years after the LDR Treatment System was scheduled to begin operation (May 2002). Last October the Consent Decree was amended at the request of the Tribes and the Company to delete the Paragraph 21 requirement to remove and treat the Pond 18 sediment in the LDR Plant. The Consent Decree now requires that the Pond 18 sediments be capped and closed in accordance with an EPA-approved closure plan. The Pond 17 requirements in Paragraph 22 were not deleted or amended; EPA authority was preserved to require Pond 17 sediments to be removed and treated if adequate NOSAP treatment of wastes did not occur. Subsequent to the amendment of Paragraph 21, FMC and Astaris halted the design and construction of the LDR Treatment System following the Company's decision in October 2001 to cease all phosphorus manufacturing at the Pocatello plant.

EPA's Evaluation of FMC's NOSAP Treatment Efforts

EPA has evaluated information FMC provided to EPA and the Tribes on November 16 and December 4, 2001, in response to requests for information on NOSAP treatment operations. This information provided details on the manner in which the NOSAP process was conducted and included the analytical results for all of the over 200 data samples gathered since the Consent Decree was lodged with the court in October 1998; the November 16 submission was also accompanied by raw and undeveloped archived operational data contained on a set of compact discs. EPA's analysis and determinations are based on all of the data provided, other than the raw data included on the compact disks. EPA has concluded, based on the information reviewed as described above, that waste discharged to Pond 17 was treated using the NOSAP process, and met the temperature, pH, and lime addition requirements. EPA, and the Tribes, however, learned in discussions with the company late last fall that neither FMC nor Astaris operated the NOSAP system in a true batch mode; precipitator dust had been added to the pots continuously, as verified in your letter of November 16, 2001, to EPA and the Tribes. Thus, as the Tribes have pointed out in their letter, not all waste discharged to Pond 17 was mixed for at least 20 minutes in the slurry pots in accordance with the NOSAP operating requirements in section 3.2.2 of the PMP. This failure to comply with applicable Consent Decree requirements may subject the Company to enforcement action by the Agency.

Treatment of waste using the NOSAP process was required to reduce elemental phosphorus levels. The NOSAP pilot study conducted by FMC in 1994, attached to the PMP as Appendix H, demonstrated that NOSAP treatment could significantly reduce elemental phosphorus concentrations. That study provided the basis for including the NOSAP treatment requirements in the PMP. However, the PMP does not specify a quantitative elemental phosphorus (P_4) level that must be achieved by NOSAP treatment. Instead, the PMP has a set of operation and performance requirements based on the NOSAP pilot study which require: that the NOSAP slurry pots be operated in a "batch mode" with a minimum residence time for the waste in the pots of 20 minutes, that a pH of at least 11.7 and a temperature of at least 55°C be achieved, and that at least one pound of lime be added to each batch to ensure that the treated waste will not be ignitable. Treated slurry that did not meet these specifications was to be discharged into Pond 18.

EPA's Evaluation of Pond 17 Closure Requirements

Paragraph 22 of Attachment A to the Consent Decree, which makes Pond 17 "subject to" the requirements of Paragraph 21 in the event that NOSAP treatment requirements are not met, requires EPA to make a determination to subject the Pond 17 sediments to the removal and treatment requirements. In making this determination, EPA needs to determine the nature of the waste that has been placed in Pond 17. As discussed below, based on an analysis of the information reviewed by EPA (i.e., all submitted information other than the archived NOSAP operational data), EPA has determined that the waste placed in Pond 17 after the effective date of the Consent Decree received sufficient treatment. The average P_4 level (calculated on a wet weight basis) in the samples collected every six days between October 1998 and October 2001 from the line that discharged NOSAP treated waste to Pond 17 (over 200 samples) was less than one-tenth the P_4 level one would expect to see in untreated samples based on the 1994 NOSAP pilot study. (No analysis of untreated samples was required under the Consent Decree.)

Data on in-place density of pond solids measured at several other ponds containing phosphorus waste that is similar to that in Pond 17 indicate that the sediment in Pond 17 can be expected to have a solids content of 60-75% after de-watering. Based on the average measured P_4 level of 137 ppm in the slurry discharged to Pond 17, which contained 20-24% solids, one can calculate that the actual P_4 concentration in Pond 17 solids would be about 500 ppm; this is well below the 1000 ppm level that FMC's data indicate would cause the solids to start smoking or burning if exposed to air. Thus, the analytical data for the treated waste provided by FMC on November 16, 2001, indicate that the NOSAP process accomplished the objective of making the waste non-ignitable.

Pond 8E contains precipitator slurry that, like the waste discharged to Pond 17, was treated with lime using the NOSAP process without a 20 minute residence time for the waste in the pots. Observations made during closure of Pond 8E further confirm that NOSAP treated waste is not ignitable. The Pond 8E sediments did not burn when exposed to the air.

Furthermore, because it contains far less P_4 , the sediment in Pond 17 poses much less of a hazard than that in Pond 18, which EPA has determined can be capped in a manner that is protective of human health and the environment. Under the Consent Decree, precipitator slurry that was not treated in accordance with the PMP NOSAP procedures is required to be discharged to Pond 18. In addition to this material, Pond 18 has also received untreated phos dock wastes as allowed under the terms of the Consent Decree. As a result of the amendment of the Consent Decree on October 4, 2001, FMC is now required to cap the sediment in Cell A of Pond 18 (where most of the sediment is located) in accordance with a closure plan approved by EPA. Thus, the Pond 18 sediment, which includes precipitator slurry that was not treated in accordance with required NOSAP operating requirements, will be capped in place in accordance with an EPA approved closure plan.

Under the Consent Decree, improperly treated NOSAP waste was to be routed to Pond 18, which was intended to be the repository for any waste to be later dredged and treated in the LDR Treatment Plant. A timely determination by FMC that its NOSAP treatment did not conform to the required standards thus would have resulted in the affected waste being sent to

Pond 18 instead of Pond 17. Now that EPA has determined that the waste in Pond 18 can be safely left in place and capped, then it follows that the waste in Pond 17, even if it includes waste that should have gone to Pond 18, can also be safely handled in the same way.

Paragraph 22 of Attachment A to the Consent Decree provides that FMC may be subject to the requirement in Paragraph 21 to remove and treat the pond sediments. EPA has determined that the waste discharged to Pond 17 has been sufficiently treated and, therefore, removal and treatment of the sediments is not required. However, in the event that any information other than that reviewed by EPA in making this determination indicates otherwise, EPA reserves its right to require FMC to remove and treat the sediment in Pond 17 in accordance with Paragraph 22 of Attachment A to the Consent Decree.

Approval of Initial Phase of Pond 17 Closure

Having determined based on its review of information submitted on November 16 and December 4, 2001 (as qualified above), that it is appropriate to proceed with closure of Pond 17, EPA hereby approves, with the modifications specified herein and in the enclosure to this letter, the removal of water and placement of the initial fill and temporary cover over Pond 17, in accordance with sections 7.2.1, 7.4.6, 7.4.7, 8.6, and 8.7 of the June 2001, Pond 17 Closure Plan. This work shall include the installation and operation of temporary gas monitoring and extraction piping. Removal of water shall continue in accordance with the approved provisions of the closure plan until settlement criteria are met.

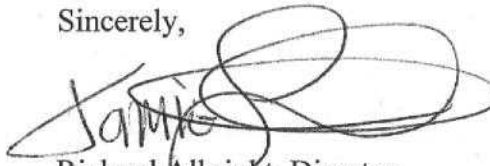
FMC and Astaris shall complete placement of initial fill, installation of the temporary gas monitoring and extraction piping, and, if weather conditions permit, placement of the HDPE interim cover during the 2002 construction season. FMC and Astaris shall use best efforts to complete placement of the HDPE interim cover during the 2002 construction season. If FMC and Astaris are not able to complete placement of the HDPE interim cover during the 2002 construction season, FMC and Astaris must submit to EPA and the Tribes, no less than 60 days prior to placement of the HDPE, a construction conditions report demonstrating that pond conditions required for placement of the HDPE interim cover in the 2003 construction season have been achieved. The report shall include, but is not limited to, all information necessary to document: pond settlement, a water balance (estimating the amount of water removed after the slag is placed and prior to the temporary HDPE placement, including infiltration due to precipitation), water management to prevent overtopping the top of the pond liner, and a description of repairs necessary prior to placement of the HDPE interim cover. FMC and Astaris shall not proceed with placement of the HDPE interim cover until EPA has reviewed the construction conditions report and approved placement of the interim cover. EPA and the Tribes shall be notified and be provided the opportunity to inspect the pond prior to placement of the HDPE interim cover.

This letter does not constitute approval of the other components of the closure plan. FMC and Astaris shall continue to operate the Fourier transform infrared (FTIR) system at Pond 17 and comply with the Pond Management Plan, incorporated into Attachment A of the Consent Decree. If FMC has not placed the interim HDPE cover by the end of the 2002 construction season, then FMC shall take one of the following actions depending on whether any of the data

collected from the Pond 17 FTIR system between January 1, 2002, and the start of placement of the initial fill (approximately May 1, 2002) meet the criteria in Section 3.3.2.3 of the PMP for initiating fence line monitoring. If any data meet or exceed the criteria, then FMC shall maintain and operate the FTIR system in accordance with the PMP as revised in the attachments to the enclosure to this letter. Conversely, if no data meet or exceed the criteria, FMC shall submit a plan to EPA and the Tribes to monitor emissions from the partially closed unit and implement the plan as approved or modified by EPA.

If you have any technical questions, please contact Linda Meyer at (206) 553-6636. Questions from legal counsel should be addressed to Andrew Boyd at (206) 553-1222.

Sincerely,


For Richard Albright, Director
Office of Waste and
Chemicals Management

Enclosure

cc: Blaine Edmo, Chairman, Fort Hall Business Council
Susan Hanson, CERCLA/RCRA Program, Shoshone-Bannock Tribes
Jeanette Wolfley, Attorney's Office, Shoshone-Bannock Tribes
David Heineck, Summit Law Group
Deborah Reyher, U.S. Department of Justice

Enclosure to Letter, dated February 1, 2002, Approving
Phase 1 of Pond 17 Closure

Modifications to the June 2001 Closure Plan

- 1) Section 1, page 1-2, the second sentence in the second paragraph is revised to read as follows: "Any hazardous liquid wastes will be sent to a new on-site water treatment facility, or otherwise managed in accordance with RCRA requirements."
- 2) Section 2.3.1, page 2-4, third paragraph, the fifth sentence in the third paragraph is revised to read as follows: "Prior to installation of lime treatment, all samples were taken from the pipeline at the furnace building prior to the precipitator slurry being transferred to surface impoundments." In addition, the following sentence is added to the end of the paragraph: "Samples taken from Tanks V-3600 and V-3800 are representative of the wastes placed in Pond 18."
- 3) Section 2.3.2, page 2-8, the following sentence is added to the end of the last paragraph in Section 2.3.2: "The allowable leakage rate (ALR) for the pond, established in accordance with 40 C.F.R. 265.222(a), is 1750 gallons/acre/day (gpapd)."
- 4) Section 2.3.2, page 2-8, the following paragraph is added to the end of Section 2.3.2: "Nylon netting was placed over the pond to prevent birds from landing on the water. The nylon net is supported by and tied to a grid of steel cables spaced at four-foot intervals. The steel cables are tied to a 36-inch diameter pipe which is set on the pond dike and extends completely around the pond, with the longitudinal cables being supported in the middle by a suspended cable-support system. The 36-inch pipe is secured to deadman anchors located outside of the pond area to resist the tensile forces in the cables that support the bird netting. The bird netting is overlain in turn by a second set of steel cables that run only in the short direction and provide further restraint to the nylon netting."
- 5) Section 2.3.3, page 2-8. The following sentences are added to Section 2.3.3: "The pumping rate from the LCDRS sump has never exceeded the action level of 50% of the ALR, with an average rate for the year 2000 of 0.015 gpapd, and a total volume pumped from November 11, 1998 through October 2001 of 18.8 gallons. There is no evidence that the bottom liner has been breached."
- 6) Section 6.1, page 6-1, second paragraph: The third and fourth sentences of the second paragraph of Section 6.1 are deleted and replaced with: "The closure activities to be conducted are described briefly below:"
- 7) Section 6.1, page 6-1, second bullet: The last sentence of the second bullet in Section 6.1 is modified to read as follows: "Water pumped from the pond during the backfill process will be sent to a new on-site water treatment facility, or otherwise managed in accordance with RCRA requirements."

8) Section 6.1, page 6-2, seventh bullet is revised to read: "Remove additional water using the temporary dewatering system and pump water from the drainage system directly to a new on-site water treatment facility, or otherwise manage the water in accordance with RCRA requirements."

9) Section 6.6, Page 6-7, the last sentence of Section 6.6 is revised to read as follows: "Therefore, will review the schedule to finalize the specific calendar days for the closure activities, notify EPA and the Tribes at least 30 days prior to beginning closure, and proceed with the closure as planned."

10) Section 6.6.1, Page 6-7, the following sentence is added to Sections 6.6.1; "The results of inspections, monitoring activities, and water quantities related to the LCDRS during closure and post-closure shall be maintained at the facility in the Health, Safety, and Environmental Department files."

11) Section 6.7, page 6-9, last paragraph. The following sentence is added to the beginning of the last paragraph in Section 6.7: "Astaris will notify EPA within five working days of any unexpected events that could affect the closure plan and/or might require an amendment to the plan."

12) Section 7.2.1, page 7-25, the last two sentences of the third paragraph are revised to read as follows: "After free surface water is removed, perforated drain pipes installed on top of the geofabric filter above the sludge will be utilized. Pipes inserted into these perforated drain pipes will initially be connected to portable vacuum pumps, and later connected to the temporary vacuum pumps to remove water. Water removed will be directed to a new on-site water treatment facility, or otherwise managed in accordance with RCRA requirements."

13) Section 7.2.1, page 7-27, the last sentence of the second paragraph is revised to read as follows: "Any water in the system will be removed and sent directly to a new on-site water treatment facility, or otherwise managed in accordance with RCRA regulations."

14) Section 7.2.1, page 7-28, last paragraph is revised to read as follows: "The existing leak detection system will continue operating during closure and post-closure. The system will be maintained, inspected, and monitored per Appendix A Sections 9.0 and 10.0 of the RCRA Pond Management Plan (September 1998) and in accordance with 40 C.F.R. § 265.226 and 40 C.F.R. § 265.228. The LCDRS sump discharge piping will be disconnected from the current header pipe and rerouted to a pumping system prior to the pond closure dewatering activity. Any water in the system will be removed and sent directly, via the pumping system, to a new on-site water treatment facility or otherwise managed in accordance with RCRA requirements."

15) Section 8.2, page 8-3 is replaced with the following three paragraphs:
"Waste in Pond 17 consists of NOSAP slurry pond solids, which will remain, and water, which will be removed during initial backfilling and pond solids consolidation. At the time of closure, the depth of the water in the pond is expected to be approximately 12 inches, occupying

approximately 5.7 acre-feet of the pond capacity. Based on experience gained at the other ponds at the facility that have received initial backfill, an estimated 18.0 acre-feet of water will be squeezed from the sludge during the placement of the initial fill. Additional sludge consolidation anticipated prior to the placement of the final cap will generate a further 5.2 acre-feet of water.”

“A PVC pipe water level marker will be driven into pond sludge near the shoreline of Pond 17, prior to the start of the initial sand fill. Water will be pumped out of the pond using dewatering pumps after sufficient sand fill is placed over the pond solids (6 inches or more in thickness). This water level marker will be used to monitor water levels during the early stages of the sand fill. All surface water will be removed using portable pumps. Additional dewatering using the dewatering system described in Section 7.4.6 will occur at the unit during the closure period, when the initial fill is placed, and will continue until settlement of the initial fill has diminished to acceptable levels. During the initial fill, water will be removed from the pond using portable pumps. These pumps are connected to the installed dewatering system which removes water from the 2-inch pipes inserted into the 6-inch perforated drain lines. As weather conditions allow, dewatering will be performed using dedicated temporary pumps.”

“The water pumped out of Pond 17 will be sent to a new on-site water treatment facility, or otherwise managed in accordance with RCRA requirements.”

16) Section 8.6.2.2, Page 8-9, the third paragraph under FTIR System Management and Removal is revised to read: “It is anticipated that the FTIR units at times may potentially interfere with widening of the perimeter dikes to accommodate the conveyor equipment for the initial fill and placement. During periods when the FTIRs are inoperable, monitoring will continue to be performed by the construction work crews. Each work crew performing work in the pond area will have a personal phosphine monitor. Work rules for all pond closure activities will be in full conformance to the requirements of the Plan Worker Safety Procedure as outlined in the RCRA Pond Management Plan, incorporated into Attachment A of the Consent Decree (PMP) and the Task-Specific Health and Safety Plan for Pond 17 (Appendix E of the Pond 17 Closure Plan). During periods when the FTIRs are inoperable, exceedances of 3.0 ppm phosphine or concentrations which remain between 1.0 and 3.0 ppm for more than 5 minutes in the pond area detected by monitoring performed by the construction crews using phosphine monitors shall require fence line monitoring in accordance with Section 3.3.2.3 of the PMP as revised below.

While Pond 17 contains open water covering the pond solids, FMC shall continue to comply with the following sections of the pond management plan and take measures as necessary to deter avian intrusion into the pond: 3.1.1.1, 3.2, 3.2.1, 3.2.1.1, 3.2.1.2, 3.2.3, 3.2.3.1, 3.2.4, 3.3, 3.2, 3.3.2.1, 3.3.2.2, and 3.3.2.3 as revised in attachment 1; 3.3, and 3.3.3 as revised in attachment 2; 3.3.5, 3.3.7, 3.5, 3.5.1, 3.6, 3.6.1, 3.6.1.1, 3.6.1.2, 3.6.1.3, 3.6.1.4, 3.6.1.6, and 3.6.2. Once the temporary cover is in place on Pond 17, FMC must comply with sections: 3.1.1.1, 3.2.1.1, 3.3, 3.3.2, 3.3.2.1, 3.3.2.2, and 3.3.2.3 as revised in attachment 1; 3.3, and 3.3.3 as revised in attachment 2; 3.3.7, 3.5, 3.5.1, 3.6, 3.6.1.3, 3.6.1.4, 3.6.1.6, and 3.6.2. FMC shall submit FTIR quarterly reports prepared in accordance with the FMC Open Path FTIR Air Monitoring System

for Ponds 16S, 17 and 18 approved by EPA on June 9, 1999, pursuant to Section 3.3.5 of the PMP, which shall include the information specified in the attachment 3.

17) Section 8.6.2.2, page 8-9, the sub-section entitled "Bird Netting Removal" is revised to read as follows: "Bird Netting Removal. To provide access to the pond area for backfilling, the bird netting system will be removed, decontaminated, if necessary, and disposed of appropriately. The bottom steel cable grid will support the removal of the upper steel cables and the bird netting and will prevent them from coming in contact with the waste. Similarly, the lateral cables of the bottom cable grid are supported on the longitudinal cables and can also be removed without contacting the waste. However, the longitudinal cables are threaded through and supported in the middle by the suspended cable system, and it may be difficult to safely prevent them and the suspension cable from dropping into the pond sludge during the removal process. These cables are basically wire ropes and it may be difficult to remove wastes that become entrapped within the spaces between the individual steel strands of the cables. Therefore, any components of the bird netting system that cannot safely be removed and/or decontaminated will be left within the area enclosed by the pond dikes and within the pond sludge. All other components of the bird netting will be disposed of according to applicable RCRA requirements as described in Section 8.11.3."

18) Section 8.6.2.2, Page 8-10, The paragraph for "Perforated PVC Piping and Sand Bedding" in Section 8.6.2.2 is modified to read as follows: "As the initial sand and slag fill will be covered with a temporary impermeable geomembrane, a contingent system of perforated PVC piping, described in Section 7.1.4.1, will be installed beneath the geomembrane to collect any potential gas build-up underneath the temporary cover. FMC shall submit to EPA and the Shoshone-Bannock Tribes a plan for: a) determining if phosphine and other gases have accumulated under the temporary cover, and b) extraction and management of such gases. This plan must be submitted to EPA and the Shoshone-Bannock Tribes within 30 days of this approval. FMC shall implement the plan as approved or modified by EPA.

19) Section 8.6.2.2, page 8-10, second paragraph under "Wick Drains" is revised to read as follows: "The wick drains will be installed through the sand fill, geoweb, fabric, and pond sludge, and will terminate approximately 2 feet above the pond bottom, which is at least 6 feet above the primary liner. In addition, the wick drains will be installed no closer than 10 feet from the base of the interior dike embankment slopes to prevent penetration through the existing bottom lining system."

20) Section 8.11.2, page 8-15, the second sentence is changed to read as follows: "Any hazardous liquid wastes removed from Pond 17 or generated from closure equipment decontamination will be sent to a new on-site water treatment facility, or otherwise managed in accordance with RCRA requirements."

21) Section 10.3, Page 10-8, the first paragraph is revised to read as follows: "The LCDRS will be maintained and monitored per Appendix A of the RCRA Pond Management Plan (September 1998) and in accordance with 40 C.F.R. § 265.226 and 40 C.F.R. § 265.228. FMC and Astaris

shall continue to comply with the Interim Status inspections, calculations, and Response Action Plans as defined in the Pond Management Plan (September 1998) during closure and post-closure to comply with 40 C.F.R. § 265.222(c) and 40 C.F.R. § 265.223 requirements for response actions. The leak detection observation well-sump will be inspected as required by 40 C.F.R. § 265.226 and 40 C.F.R. § 265.228, and within 48-hours after each 25-year storm event. The results of inspections, monitoring activities, and water quantity monitoring related to the LCDRS during closure and post-closure will be recorded and maintained at the facility in the facility's Health, Safety and Environmental Department files. Water will be removed from the leachate collection sump and disposed of as described in Section 8.11.2.

22) Appendix E, Page 5, Table E-1

Hydrogen cyanide is added to the list of chemicals potentially present at Pond 18.

Attachment 1

3.3.2.3 Threshold Levels and Response Actions at the Fenceline and Off Site

This section describes the threshold levels for initiating offsite monitoring and response actions in the event that action levels are equaled or exceeded. FMC shall inform the Power County Sheriff, the Idaho State Police, the Union Pacific Railroad, the Idaho State Emergency Response Center, and the Shoshone-Bannock Tribes Department of Public Safety of these monitoring and response procedures by September 30, 1998.

Overview of Offsite Response Procedures

FMC shall monitor phosphine and hydrogen cyanide levels at three points along Highway 30 whenever the concentrations of either of these compounds along the fenceline south of Highway 30 equal or exceed threshold screening levels (0.33 ppm for phosphine and 9.8 ppm for hydrogen cyanide). If phosphine levels along Highway 30 equal or exceed a 1-hour response action level of 0.25 ppm (or hydrogen cyanide equals or exceeds 7.1 ppm), FMC shall escort any pedestrians, joggers, persons stopped or working along the adjacent area, train switchers, and stranded or stopped motorists from the area along the highway.

These phosphine and hydrogen cyanide action levels are proposed federal guidelines referred to as Acute Exposure Guideline Levels (AEGs). The guideline values for phosphine were published by the EPA on October 30, 1997 (62 FR 58840), and the guideline values for hydrogen cyanide were subsequently developed and made available for public review. These proposed hydrogen cyanide values were made available at a public meeting (see 62 FR 27733). The Highway 30 response action levels are based on a potential 1-hour exposure period; these levels may be amended, with the approval of EPA. The fenceline threshold screening levels were calculated using the EPA SCREEN3 dispersion model to predict concentrations that would not exceed 0.25 ppm phosphine and 7.1 ppm hydrogen cyanide at Highway 30. This model takes into consideration the dispersion (i.e., dilution) that occurs as air flows from the fenceline north of Pond 16S and Pond 18 to Highway 30 (a minimum distance of approximately 86 meters). The fenceline threshold levels were calculated for low wind speeds and stable atmospheric conditions; these conditions would tend to minimize the amount of dilution of phosphine and hydrogen cyanide between the ponds and the highway.

Fenceline Monitoring and Response Procedures

As noted in Section 3.3.3, phosphine levels are measured every 4 hours at six locations along the northern fenceline, at two locations west of the RCRA pond area, at two locations south of the pond area, and at two locations east of the pond area. Additional measurements shall be made at Sites 1 through 6 as soon as practicable, but no longer than 30 minutes after phosphine levels equal or exceed 3.0 ppm (or remain between 1.0 and 3.0 ppm for more than 5 minutes) in the pond area. If hydrogen cyanide levels equal or exceed 10 ppm in an area within the RCRA pond area, hydrogen cyanide levels will be measured at fenceline locations 1 through 6 using Draeger tubes (or comparable equipment) as soon as practicable but no

longer than 30 minutes later.

After discontinuing monitoring of phosphine or hydrogen cyanide at the fenceline or offsite because levels at those locations drop below the threshold requiring further action, FMC staff shall recheck phosphine or hydrogen cyanide levels at the ponds. If phosphine levels remain at or above 1.0 ppm or hydrogen cyanide levels remain at or above 10 ppm in the pond area, additional measurements shall be initiated at Sites 1 through 6 within thirty minutes.

Phosphine measurements are routinely made using a direct-reading personal phosphine monitor. Because this instrument is cross-sensitive to hydrogen cyanide, it is possible that the phosphine concentration recorded by the instrument is greater than the concentration of phosphine actually present in the air. Consequently, whenever the direct-reading personal phosphine monitor records a level equal to or exceeding target levels, either along the fenceline or off site, the FMC technician taking the measurement will immediately make a confirmation measurement using phosphine and hydrogen cyanide detector tubes, such as those manufactured by Draeger, and the resulting measurements will be used in place of the direct-reading personal phosphine metering data. Monitoring data indicating concentrations equal to or exceeding phosphine or hydrogen cyanide threshold levels at the fenceline shall be included in the status reports on pond operations described in Section 3.6.2. The DBT Environmental Chief shall radio (or phone) the Pond Security Guard to prevent entry into the affected pond area without adequate PPE when confirmed concentrations above the thresholds described in the first paragraph of this subsection are observed. The DBT Environmental Chief shall also notify the Security Guard.

Offsite Monitoring and Response Procedures

Monitoring of phosphine and hydrogen cyanide levels along Highway 30 shall be initiated if the confirmation sample at any northern fenceline monitoring point (i.e., Sites 1 through 6) equals or exceeds the phosphine threshold level of 0.33 ppm or the hydrogen cyanide threshold level of 9.8 ppm. The first offsite measurement shall be made within 15 minutes unless access is delayed by factors outside of FMC's control, in which case the measurement will be taken as soon as possible. The first offsite measurement shall be made at Site A, as shown in Figure 3-2. The direct-reading personal phosphine monitor shall be initially used in taking these measurements.

If the phosphine measurement obtained with this monitor equals or exceeds 0.25 ppm at Site A, B, or C, a confirmation sample shall be immediately collected at the relevant monitoring site using a detector tube (e.g., Draeger tube). Once sampling at the first location is completed, including confirmation sampling, the Security Officer (or alternate FMC personnel) shall drive to the next site in sequence, where an initial phosphine measurement shall be obtained using the personal phosphine monitor. Should the initial phosphine level equal or exceed 0.25 ppm at any location, a confirmation measurement shall be collected using a detector tube. This

process shall be continued through Site C, whereupon the Security Officer (or alternate FMC personnel) shall immediately repeat the sequence of offsite measurements, beginning with the first location and will continue to repeat these measurements as provided below in the section on Communication and Continued Surveillance. The Security Officer shall maintain radio contact with the Shift Manager while collecting these measurements.

Data Assessment along Highway 30

The Security Officer (or alternate FMC personnel) shall average the confirmatory phosphine measurements at each location and average the confirmatory hydrogen cyanide measurements at each location. If, at any time at any location, the average phosphine concentration equals or exceeds 0.25 ppm, or the average hydrogen cyanide concentration equals or exceeds 7.1 ppm, the Security Guard or the other FMC personnel shall advise any individuals within the area of potential exposure and escort them out of the area of potential impact. If a train is idling on the Union Pacific Railroad line in the vicinity of the above threshold readings, the Security Officer shall advise the engineer by radio to move the train out of the area. Immediately after initiating these actions, but in no event later than 30 minutes, notice shall be made of the confirmed exceedance of phosphine or hydrogen cyanide threshold levels at Highway 30 to the Shoshone-Bannock Tribes, EPA Region 10 (RCRA Compliance Unit Manager), and, if assistance is required, the Power County Sheriff. The same data may also be forwarded to these parties by email.

Communication and Continued Surveillance

Whenever phosphine or hydrogen cyanide levels are being monitored along Highway 30, the Security Officer (or alternate FMC personnel) shall communicate these data to both the Shift Manager and the DBT Environmental Chief. The DBT Environmental Chief (or alternate FMC personnel) engaged in monitoring phosphine levels along and near the RCRA Ponds shall similarly communicate these data to the Shift Manager and the Security Officer.

When phosphine and hydrogen cyanide concentrations in the RCRA pond area and at the fenceline remain below the threshold levels specified in Table 3-2, the DBT Environmental Chief shall relay the status to the Pond Security Guard and the Security Officer. The Security Officer (or alternate FMC personnel) shall continue offsite measurements and surveillance of Highway 30 until two consecutive sets of measurements taken in the sequence described above indicate that phosphine levels are less than 0.25 ppm (and hydrogen cyanide levels are less than 7.1 ppm) at each of the Highway 30 locations (Sites A, B, and C). Offsite monitoring and surveillance shall be discontinued when this condition is reached, unless otherwise directed by the Shift Manager or as requested.

3.3.3 FMC Shall Continue A Fenceline Monitoring Program for Phosphine and Hydrogen Cyanide

FMC shall continue to monitor phosphine levels every 4 hours at the facility fenceline north of the RCRA pond area. Monitoring shall be conducted at locations 1 through 12 specified on Figure 3-2 by the DBT Environmental Chief as part of the routine RCRA pond area surveillance, which occurs every 4 hours, day and night, 7 days a week. The DBT Environmental Chief shall use phosphine monitors (manufactured by MST Measurement Systems), and record monitoring data, include the date and time of each measurement on a form. Monitoring equipment providing comparable or better performance may be substituted for the named equipment in the future.

The DBT Environmental Chief shall complete the data sheet by entering the meter reading for each location, and the time of the reading. The DBT Environmental Chief shall also record on the form the results of all confirmatory tests and the time when each measurement was made. Similarly, the DBT Environmental Chief or other person conducting offsite monitoring shall record the time and meter reading or confirmatory test result for each offsite location. The DBT Environmental Chief shall sign and date the form(s) and submit it (them) to the Environmental Technician (by placing the form in the Environmental Technician's mail box) on a daily basis.

FT-IR AIR MONITORING SYSTEM QUARTERLY REPORTS CONTENTS

1. Introduction
2. Maintenance summary
3. Data Presentation and Analysis
 - a. Summary of quarterly data
 - b. Phosphine [PH_3] and hydrogen cyanide [HCN] exceedances based on hourly averaged data [discussion, table and figures]; the table shall show all instances when PH_3 exceeds 1.0 ppm or HCN exceeds 10 ppm, and for each instance, provide information on location, date and time, concentration, wind speed and direction, temperature, and response actions taken.
 - c. Specific data analysis: discussion of 5 min exceedance data for PH_3 and HCN
 - d. Hydrogen fluoride assessment
4. Quality Assurance Summary
5. Appendices containing the following information:
 - a. all fenceline monitoring conducted [that done in response to FTIR alarms or for any other reason as well as routine 4-hr monitoring], and the actual time of measurement for each confirmatory Draeger tube measurement.
 - b. tabulation of the following information for each occasion when the 5 minute averaged FTIR PH_3 measurement on any leg of any pond exceeded 1.0 ppm: date, time, concentration, wind speed and direction, and location of such measurements; and the time fenceline monitoring in response to the event was initiated.
 - c. tabulation of the following items for each occasion when off-site gas monitoring was performed:
 - i. Date, time, concentration, analytical method, wind speed and direction, nature of trigger or event that warranted off-site gas monitoring (e.g., FTIR alarm, routine four hour surveillance monitoring, or levels reported by persons working near the ponds) and location of measurement(s) triggering off-site gas monitoring
 - ii. Off-site monitoring data, including location, time, analytical method and concentration for each measurement taken in response, and
 - iii. Description of any and all actions taken in response, including the date and time each action was taken.
 - d. tabulation of all occasions during the quarter when fence-line monitoring in response to an FTIR alarm indicating an exceedance of the threshold values of 1.00 ppm PH_3 or 10 ppm HCN was **not** conducted, specify the reason(s) Astaris did not initiate monitoring, and describe measures taken to prevent the recurrence.